Inventorship Order Correction

With reference to our letter dated December 2, 2005, Applicant has requested that the order of inventorship be changed to be: Qi Yang Peng, Hanwu Hu, Jidong Xu, Jie Sun and Nima Ahmadvand. We look forward to receiving confirmation that this has been completed.

Claim Rejections – 35 USC 103

The Examiner rejects claim 2 under 35 USC 103(a) as being unpatentable over United States patent No. 6,307,984 ("Watanabe"). In response, Applicant respectfully traverses the Examiner's rejection for reasons detailed below.

The Examiner contends that Watanabe teaches "the nonlinear medium connected to receive the amplified optical signal, and to yield comblike multi-channel WDM laser signals [emphasis added] separated from each other by said channel spacing frequency" in Figures 17A and 17B. Applicant respectfully disagrees. The present application teaches that "In order to produce a Multi-Wavelength Laser Source (MWLS), the nonlinear medium 14 is designed and optimised to broaden the spectrum to cover a target band [emphasis added], such as C-Band, L-Band, S-Band or any contiguous combination of those or some other band." on page 13, lines 12-15. Therefore, the nonlinear medium in the present application is designed so that the amplified optical signal is broadened or expanded to cover a target band. Specifically, the nonlinear medium is designed to generate comblike multi-channel WDM laser signals from the amplified optical signal. The present application provides many examples. Figure 2 presents an example fiber dispersion profile of a first fiber combination with highly nonlinear fiber and a single mode fiber. As described on page 17, lines12-13, "two DFB lasers are tuned to 1546.119nm and 1546.916nm". Figure 3 presents simulation results for the combination shown in Figure 2. As seen in Figure 3, comblike multi-channel WDM laser signals are generated using the combination shown in Figure 2. Figure 3 shows that the comblike multi-channel WDM laser signals cover a band from about λ=1.495 to λ=1.605, which includes many wavelengths including the wavelengths of the two DFB lasers.

Turning now to Watanabe, Figure 15 is a block diagram of an optical communication system and is described in column 19, lines 10-25. The optical communication system has n-different transmitters as labelled 2-1, 2-2,...2-n. An optical multiplexer 62' is provided directly after the optical transmitters. A first optical fiber 4 connects the optical multiplexer 62' to a phase conjugator 6. Applicant appreciates that Watanabe suggests that the phase conjugator may include a nonlinear medium (see column 29, lines 32-35). However, in contrast with the present application, the phase conjugator 6 is not used to generate comblike multi-channel WDM laser signals. Rather, the phase conjugator 6 converts a signal beam supplied thereto from the first optical fiber 4 into a first phase conjugate beam and outputs the first phase conjugate beam (see column 5, lines 26-29). Figures 17A and 17B illustrate this point. The wavelengths of signal beams outputted from the optical transmitters 2-1, 2-2, ... 2-n are represented by λ_{s1}, λ_{s2}, ... λ_{sn}, respectively. The wavelength λ_{c1}, λ_{c2}, ... λ_{cn}, of phase conjugate beams outputted from the phase conjugator 6 are disposed at positions symmetrical with the wavelengths λ_{s1}, λ_{s2}, ... λ_{sn} of the signal beams with respect to the wavelength λ_p, of pump light. Therefore, the phase conjugator 6 generates a single beam from each of the optical transmitters 2-1, 2-2, ... 2-n. This is completely different from generating a plurality of signals, specifically comblike multi-channel WDM laser signals, from an amplified optical signal as in the present application.

In view of the forgoing, Applicant submits that Watanabe does not teach or suggest a nonlinear medium for generating comblike multi-channel WDM laser signals from an amplified optical signal as defined in claim 2 of the present application. Therefore, Applicant submits that claim 2 of the present application is patentable over Watanabe. The Examiner is respectfully requested to reconsider and withdraw the rejection of claim 2 under 35 USC 103(a).

Upon allowance of claim 2 as a generic claim, the Examiner is also respectfully requested to allow the previously withdrawn claims

In view of the foregoing, early favorable consideration of this application is earnestly solicited.

Respectfully submitted,

NIMA AHMADVAND, ET AL.

By _____
Allan Brett
Reg. No. 40,476
Tel.: (613) 232-2486

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RAB:PDB:kbc:rld